

J A P A N · E C O N O M I C · I N S T I T U T E

J E I

R E P O R T

NO. 21A

June 5, 1987

U.S. EXPORTS TO JAPAN: A REVIEW OF 1986 SALES

Summary

Economists weighing the near-term prospects for U.S. exports to Japan at the end of 1985 concluded almost unanimously that the sluggish state of the Japanese economy would cancel out most of the competitive benefits of the dollar's continuing drop against the yen. When the 1986 sales numbers were tallied, however, the consensus projection seemed to be way off base. Exports after all had climbed 18.8 percent to \$26.9 billion in their strongest performance since 1979. But a closer look at the figures revealed that nearly three-fourths of this jump reflected a one-time \$3.1 billion shipment of foreign bullion through the United States to Japan. Sales of domestically produced goods, it turned out, were up by only 5 percent -- just enough to make up for 1985's export decline.

Fortunately for most U.S. exporters, last year's sales results were better than the bottom line indicated. The capital goods category strengthened its four-year position as the export bellwether by expanding 13.3 percent to \$6.7 billion, while consumer goods reversed course and advanced 19.4 percent to \$1.7 billion. Moreover, sales of high value-added food products and intermediate goods increased, often by substantial margins. But in a repeat of what had happened in 1985, exports of most bulk agricultural and industrial supplies could not overcome the triple handicap of limited or no growth in the Japanese market, lower international commodity prices and stiff competition from third-country suppliers. This outcome took a heavy toll on the export total as sales of industrial supplies inched back just 0.8 percent to \$8.8 billion and the outflow of food and feed edged up by the same slim margin to \$5 billion.

Export Profiles

Industrial Supplies - American suppliers of industrial raw materials and intermediate inputs beat long odds in 1986 when they regained the export business lost in Japan the year before. The only factor working in favor of a turnaround was the dollar's continuing fall against the yen. Coming on top of 1985's 20.2 percent drop, the 20.6 percent decline in the American currency over the course of last year unquestionably gave U.S. exporters a powerful sales weapon. The biggest unknown was whether the weaker dollar could counter the demand-dampening effects of the first downturn in 11 years in Japanese industrial output. There was also some question about how American companies would fare in the increasingly tough international competition to supply Japan's industrial input requirements, particularly since the currencies of several rivals move in synch with the dollar. Moreover, it was clear from 1985's experience that U.S. exporters had less room to exploit the competitive problems of energy-intensive Japanese industries because lower oil prices and the weaker dollar had enabled them to get a better handle on their high production costs.

Increased sales of a surprisingly long list of intermediate products last year demonstrated the competitive benefits of the dollar's depreciation. Logs and lumber, however, provided the most vivid example since exports jumped 24 percent to \$1.1 billion even though residential construction activity and inventory levels signaled no growth. Japanese housing starts did increase in 1986 for the third straight year, reaching their highest level since 1978, but this expansion promised little extra business for sawmills, whether domestic or foreign, because of the ongoing decline in both the number of wood houses built and their average floor space. Moreover, unlike 1985, Japanese wholesalers and sawmills entered last year with ample stocks of North American softwood logs.

What transformed 1986 into a big year for Pacific Northwest log and lumber exporters was the pricing flexibility the weaker dollar gave them. For starters, price cuts as deep as 40 percent enabled U.S. suppliers of softwood logs to contain a major Japanese sales push by their chief rivals, the Soviets, and to recapture some of the additional market share won in 1985 by Canada, the number-three supplier. More importantly, bargain prices on American softwood logs enticed Japanese sawmills to switch part of their purchases from domestic supplies, normally the source of roughly one-half of the country's softwood lumber, to the United States. Shipments soared as American producers took sales from their Canadian competitors.

Exporters of paper base stocks profited as well from the weaker dollar. But they had some help in boosting sales 19.9 percent to just under \$0.6 billion since the paper and paperboard industry was one of the few Japanese basic industries to expand output in 1986. This expansion was achieved in part by increased usage of waste paper -- a plus for American recycling centers but a blow to producers of softwood chips, which were also stymied by the continuing shift in Japanese production from kraft and other brown papers to white papers made from hardwood chips. At the same time, though, U.S. wood pulp suppliers picked up business that in earlier years would have gone to Japanese mills or Canadian competitors.

Much to the frustration of struggling American suppliers of inputs used by Japan's other basic industries, the weaker dollar proved to be a paper weapon. Take petrochemicals for example. Japanese manufacturers of ethylene -- the basic building block for such petrochemical intermediates as ethylene dichloride, ethylene glycol and acrylonitrile -- managed to bring their production costs closer to internationally competitive levels in 1986, thanks in large part to a slide in the price of naphtha, the industry's dominant feedstock and fuel, but also because the most inefficient third of their capacity remained mothballed. Falling oil prices also gave producers of benzene, the raw material for derivatives like styrene monomer, help on the cost front. The result was predictable: Japanese petrochemical makers were again able to thwart attempts by American exporters to supply more of the slow-growing demand for commodity products in downstream industries like plastics.

U.S. suppliers of industrial inorganic chemicals continued to have a major cost advantage over their Japanese counterparts in commodity products. Yet because of reduced demand in virtually all end-user industries, they were generally no more successful at capitalizing on the dollar's fall than petrochemical producers. The lower dollar was, however, the ticket to bigger sales for manufacturers of uranium and thorium compounds. In fact, exports of these products, which are used primarily as catalysts and reagents in medical research and diagnostic procedures, were up by such a large margin that they almost single-handedly lifted total chemical sales 14.1 percent to \$1.7 billion.

West Coast petroleum refiners also discovered last year that they could no longer profit from the problems of their Japanese counterparts. Japan had developed into an expanding market for California refineries' surplus stocks of residual fuel oil in the first half of the 1980s since continuous reductions in Japanese fuel oil production had created a growing shortage of heavy fuel oil for specialized uses, particularly bunker fuel for coastal shipping. Fuel oil output dropped in 1986 as well, again in response to slow economic growth and the ongoing switch to nuclear power and liquefied natural gas for electricity generation and to coal for industrial fuel consumption. This time around, though, the cutback left supply and demand for heavy fuel oil in better balance, costing West Coast refiners most of their sales. They did pick up some business from a shortfall in light fuel oil supplies and the partial decontrol of gasoline imports, but U.S. exports of petroleum products were still off by 25.5 percent to under \$0.6 billion.

Unlike other bulk suppliers, coking coal exporters never banked on any benefits from the falling dollar since there was no reason to think that market conditions in 1986 would be any better than in previous years. They were right. Japanese steel production fell last year, pulled down for the fourth time since 1980 by smaller orders from all major domestic steel users except the civil engineering sector and by reduced shipments to this country. Moreover, electric furnace operators again upped their share of output. But these twin constraints on coking coal demand were just minor causes of the U.S. industry's pessimism. The real problem was all too familiar: steel mills continued to have a glut of coking coal under long-term contract from mines in Australia and Canada, including some financed or owned in part by Japanese interests. American coal companies were once more forced to shoulder the complete adjustment. As angry as U.S. exporters were about 1986's 27.2 percent

drop in sales to just \$0.5 billion, they reserved their harshest criticism for the fact that purchases from the Soviet Union, China and South Africa were being increased at the same time that the American share of the imported coking coal market was being cut to only 16.7 percent -- half the level of the early 1980s.

Food and Feed - What happened to shipments of feed grains and soybeans in 1986 demonstrated that the decline in the dollar's value could be a mixed blessing, at least for exporters of these big-ticket bulk commodities. On the plus side, the weakening dollar on top of falling ingredient costs allowed Japan's formula feed industry to extend the string of price cuts that started in the April-June 1984 period through last year's four quarters. With these cuts more than offsetting another drop in the prices received by producers of eggs, milk, poultry meat and pork, demand for commercially mixed livestock and poultry feed remained on the upswing.

Backed by rising demand, particularly for beef rations and poultry feed, formula feed production expanded for the fifth straight year in 1986. In a repeat of both 1984 and 1985, however, sorghum supplied a disproportionate share of the extra volume needed to raise output. Corn usage did increase, especially in the October-December period when relative feed grain prices tilted back in favor of this ingredient. But as hard-pressed exporters had learned in 1985, greater corn consumption no longer meant more business for American suppliers. Quite the opposite, in fact, as Japanese trading companies upped their purchases of lower-priced and higher-quality Argentine and Chinese corn at the expense of U.S. shipments, which only supplied 73 percent of the feed industry's 1986 corn requirements.

That was not the end of the bad news for domestic corn exporters. After a two-year absence because of short supplies, South Africa was back in the Japanese market for corn to manufacture sweeteners, starch and other processed corn products. To make room for shipments from its preferred supplier and to accommodate arrivals from China, a new competitor in this market, the industrial corn industry slashed purchases from the United States. This one-two blow translated into another big drop in the volume of American corn shipments, but with export prices also falling in 1986, the drop had twice the impact on the trade figures -- a contraction of one-third to under \$0.9 billion.

U.S. soybean exporters were no more able to capitalize on the growth in Japanese formula feed production than corn suppliers. In other years, an expansion in feed output on the order of 1986's gain would have led to at least some increase in the use of vegetable protein meal, but that relationship did not hold last year because feed grain prices were so attractive. Soybean meal was actually at a double disadvantage since rapeseed meal prices came down faster than quotes on the main protein meal ingredient in feed. Soybean meal usage consequently dipped in 1986, forcing oilseed processors to trim the crush for the second time in three years.

As it turned out, crushers should have scaled back output by a bigger margin since soybean meal stocks mounted during 1986, ending the year at twice 1985's carryover level. Why processors did not have a better handle on the crush is a mystery. Vegetable oil consumption did expand last year, but a small increase in rapeseed crushing (which yields less meal than soybean crushing) and higher imports of palm oil were more than adequate to supply this growth.

Whatever the reason, it propped up U.S. soybean exports. So, to a lesser extent, did a cutback in purchases from Brazil, which in 1985 broke this country's monopoly on providing all the soybeans crushed by the Japanese industry. American shipments were still off, but even with another drop in export prices, sales declined by a limited 10.7 percent to \$0.8 billion-plus.

Capital Goods - Analysts rated the chances of an increase in 1986 capital goods exports as even at best, worried that the decline in the dollar's value was no match for the slowdown in the growth of business investment from the double-digit rates of 1984 and 1985 to a low single-digit figure. Their concerns proved unfounded as sales expanded by the biggest margin since 1983. These results were admittedly inflated by the strong performance of commercial aircraft and aircraft parts, but unlike 1985 when aerospace exports were responsible for all the increase in the capital goods number, sales of both nonelectric and electric machinery expanded last year. U.S. high technology companies in particular clearly used their improved international price competitiveness to win more of what business was generated by Japan's manufacturing sector in its attempt to cope with the fallout from the soaring yen -- whether through modernization, including automation aimed at cost reduction, diversification or the development of new product and process technologies.

Sketchy information indicates, for example, that American computer manufacturers managed to add several points to their share of the slower-growing Japanese market in 1986 even though exports of systems, peripheral equipment and parts expanded by a modest 5.2 percent to \$1.4 billion. A mid-1986 survey by a Japanese trade publication placed the U.S. share of Japan's installed base at 36 percent overall and 45 percent in large mainframes, thanks in large part to the success of International Business Machines Corp.'s made-in-Japan 3090 (Sierra) series. But this survey only covers full-line American and Japanese suppliers, not specialized manufacturers like makers of engineering workstations and super minicomputers -- and these are two of the areas in which U.S. competitors made inroads in the Japanese market last year.

Manufacturers of medical equipment, electrical testing equipment and a long list of other capital goods also parlayed their technical expertise and the lower dollar into bigger exports in 1986. Higher aircraft sales provided the icing on the cake. Japanese airlines took delivery of the same number of planes last year -- 17 -- as in 1985, but a change in the product mix boosted exports 28.2 percent to almost \$1.2 billion. Japan Air Lines added seven of Boeing Co.'s 747s to its fleet of 50 jumbo jets -- four for international passenger service, two for domestic routes and a freighter. It also took delivery of another three 767s for domestic use. For its part, All Nippon Airways put two more 767s into service, bringing its fleet of Boeing's latest generation of widebody medium-range planes to 23, while acquiring three 747s to facilitate the start of scheduled international service. Moreover, McDonnell Douglas Corp. delivered two additional MD-80s to Toa Domestic Airlines, the number-three Japanese carrier.

Consumer Goods - Nowhere was the marketing power of the weaker dollar more evident than in the rebound of consumer goods exports since the growth of Japanese spending on durables and nondurables, already sluggish, slowed in 1986. Expanded sales of diamonds, art works and other luxuries represented a big part of the increase, but pharmaceuticals, the mainstay of this category,

also participated in the expansion. In boosting exports 9.6 percent to \$0.6 billion-plus, American drug companies bucked what apparently was the fourth straight year of flat sales numbers for their Japanese competitors, which have been hard hit by a series of Ministry of Health and Welfare-mandated cuts in drug prices and fierce competition in antibiotics, the industry's biggest product line. While American pharmaceutical houses did not shy away from the fray in antibiotics, a major key to their 1986 success was the ability to capitalize on emerging growth markets, including cardiovascular drugs and diagnostic test kits.

Export Prospects

While analysts missed the mark last year in predicting that sluggish Japanese economic growth would cancel out most of the competitive benefits of the dollar's decline, this forecast could prove accurate in 1987. Any rise in the sale of industrial supplies will have to come from increased exports of the many manufactured products in this category -- an iffy development --since the prospects for bulk raw materials are uniformly glum. Similarly, the continued expansion projected for sales of meat, fish and fruits and vegetables might not be sufficient to cover another decline in the value of grain and soybean shipments. That places the burden for an overall sales gain on capital goods. While aerospace exports will remain strong, it is not clear that other U.S. high technology companies will be able to expand sales in what could shape up to be a no-growth year for Japanese capital spending.

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The views expressed in this report are those of the author and do not necessarily represent those of the Japan Economic Institute.

U.S. Exports to Japan by Commodity, 1985 and 1986

(in millions of dollars and indicated quantity units)

Commodity	Quantity		Value		Percent Change 1985/86	Japan's Share of U.S. Exports 1986
	1985	1986	1985	1986		
Total Exports			\$22,630.8	\$26,881.6	18.8%	12.4%
Industrial Supplies						
Bituminous Coal	15,370,720 stn	11,369,424 stn	8,679.9	8,751.5	0.8	15.2
Coking Coal	13,903,308 stn	10,478,546 stn	769.1	544.7	-27.9	14.4
Steam Coal	1,467,412 stn	890,878 stn	712.9	518.9	-27.2	19.7
Petroleum Products						
Gasoline	220,584 bbl	4,539,690 bbl	56.2	567.7	35.8	2.9
Jet Fuel (kerosene type)	707,637 bbl	1,396,427 bbl	762.0	79.0	-25.5	21.9
Light Fuel Oils	2,534,194 bbl	5,720,741 bbl	7.0	33.4	1,028.6	28.2
Heavy Fuel Oils	17,423,590 bbl	9,315,609 bbl	74.8	115.4	50.5	22.4
Lubricating Oils			432.6	132.1	54.3	20.3
Petroleum Coke (excl. calcined)	3,456,521 stn	3,440,614 stn	24.3	27.9	-69.5	19.0
Natural Gas	54,174,547 mcf	52,670,591 mcf	157.2	119.2	14.8	4.7
Nuclear Reactor Fuels			249.1	187.0	-24.2	24.2
Logs and Lumber			121.5	28.7	-24.9	99.0
Logs			884.9	1,097.4	-76.4	12.3
Douglas-fir Logs	2,523,343 mbf	2,956,691 mbf	682.2	788.9	24.0	49.0
Western Hemlock Logs	1,899,035 mbf	2,076,718 mbf	15.6	15.6	64.3	64.3
Lumber	1,019,640 mbf	1,216,461 mbf	361.7	451.0	24.7	79.3
Paper Base Stocks	679,058 mbf	621,822 mbf	209.5	198.8	-5.1	55.4
Wood Chips	624,308 mbf	881,973 mbf	202.7	308.5	52.2	31.2
Wood Pulp	2,169,430 stn	2,115,988 stn	470.2	563.8	19.9	24.8
Waste Paper	732,901 stn	948,591 stn	160.6	154.3	-3.9	90.8
Paper and Paper Products	301,417 stn	399,064 stn	277.6	359.3	29.4	21.6
Newspaper			31.2	47.2	51.3	11.5
Kraft Linerboard	181,412 stn	194,127 stn	288.9	354.0	22.5	14.3
Container Base Stock	150,149 stn	166,110 stn	81.6	123.2	51.0	63.3
Chemicals (excl. plastics, fertilizers and insecticides)	137,127 stn	143,604 stn	97.5	102.7	30.1	7.9
Cyclic Hydrocarbons			1,513.2	1,726.4	14.1	49.5
Styrene			59.2	57.1	-3.5	15.3
Para-xylene	58,781 stn	43,415 stn	27.3	15.3	-44.0	10.0
Cyclic Hydrocarbons	20,132,352 gal	28,415,688 gal	30.6	39.9	30.4	6.2
Acyclic Organic Intermediate Chemical Compounds			30.5	26.8	-12.1	18.4
Alcohols, Phenols and Their Derivatives			143.2	159.9	11.7	10.2
Nitrogen Function Compounds and Their Derivatives			57.5	67.3	17.0	11.7
Acyclic Organic Chemical Products			36.9	31.1	-15.7	32.1
Ethylene Dichloride	29,154 stn	26,436 stn	350.0	346.3	-1.1	21.4
Acrylonitrile	328,939 stn	162,392 stn	58.8	32.0	-45.6	14.5
Vinyl Acetate Monomer	85,954 stn	102,145 stn	47.6	49.7	4.4	56.8
Uranium and Thorium Compounds	60,180 stn	57,582 stn	25.2	22.3	-11.5	20.7
Sodium Compounds	776 stn	798 stn	437.5	600.2	37.2	17.9
Soda Ash			51.1	53.4	4.5	56.7
Pigments	226,759 stn	235,465 stn	22.5	26.6	18.2	8.1
Color Lakes and Toners, Dyes and Paints			29.7	29.7	0.0	11.5
Antiknock Compounds and Additives for Lubricating Oils			35.6	40.5	13.8	12.3
Laboratory Reagent Preparations			67.5	58.6	-13.2	8.2
Fertilizers and Fertilizer Materials			21.6	31.7	46.8	18.6
Unaired Pesticides			n.a.	99.1	n.a.	5.1
Manufactured Pesticides			66.1	80.6	21.9	10.6
Plastic and Synthetic Resin Compounds			60.0	66.7	11.2	10.0
Film, Strips and Sheets			305.6	322.0	5.4	8.1
Synthetic Rubber			47.0	54.5	16.0	8.3
			51.0	65.8	29.0	10.1

Commodity	Quantity		Value		Percent Change 1985/86	Japan's Share of U.S. Exports 1986
	1985	1986	1985	1986		
Tall Oil	65,698 stn	51,166 stn	\$34.3	\$15.9	-53.6%	62.2%
Photographic Chemicals			31.9	24.6	-22.9	14.4
Still X-Ray Film	54,044,378 sft	63,066,347 sft	35.6	49.6	39.3	35.7
Graphic Arts Film	62,849,597 sft	69,118,972 sft	23.3	31.0	33.0	24.5
Still Photographic Film (excl. film packaged for retail sale)	23,018,655 sft	24,933,414 sft	26.8	41.6	55.2	16.4
Photosensitive Papers			26.7	33.3	24.7	11.3
Steel Scrap	2,110,087 stn	1,725,068 stn	199.1	170.0	-14.6	16.1
Nonferrous Ores and Scrap			459.6	491.8	7.0	31.9
Copper Ore	113,354 stn	145,104 stn	108.9	141.3	29.8	75.2
Molybdenum Ore	3,515 stn	2,909 stn	26.2	16.6	-36.6	12.2
Copper Scrap	42,155 stn	42,154 stn	42.8	43.7	2.1	15.7
Aluminum Scrap	290,591 stn	264,115 stn	243.7	223.8	-8.2	68.2
Platinum and Platinum Group Metals	185,665 toz	108,312 toz	62.7	29.9	-52.3	30.4
Aluminum and Aluminum Alloys			237.7	188.4	-26.9	23.1
Aluminum Ingot	218,620 stn	144,849 stn	239.2	161.7	-32.4	57.2
Unwrought Magnesium	11,149 stn	9,926 stn	28.6	25.8	-9.8	24.1
Gold	84,667 toz	569,906 toz	25.7	243.9	849.0	13.9
Iron and Steel (incl. ferroalloy)			48.4	51.7	6.8	4.8
Silicon			30.4	33.2	9.2	51.0
Unmanufactured Nonmetallic Minerals			104.8	111.5	6.4	14.5
Kaolin Clay			60.2	65.3	8.5	30.6
Other Clays	437,244 stn	455,408 stn	28.1	27.2	-3.2	19.7
Manufactured Mineral Supplies			111.1	128.0	15.2	9.4
Glass (excl. automotive and mirror glass)			30.7	36.0	17.3	7.3
Industrial Textile Fibers, Yarns and Fabrics			69.3	74.1	6.9	2.9
Synthetic Fibers and Manmade-Fiber Yarns			37.6	42.1	12.0	3.8
Raw Cotton	1,065,454 rba	784,735 rba	368.0	238.6	-35.2	30.9
Hides and Skins			298.2	331.4	11.1	25.2
Whole Cattle Hides	6,824,464 pc	6,624,385 pc	276.1	302.2	9.4	25.2
Leaf Tobacco	51,002 stn	40,736 stn	302.4	227.1	-24.9	18.8
Stemmed Flue-Cured Leaf	31,897 stn	22,192 stn	211.3	148.4	-29.8	23.2
Stemmed Burley Leaf	11,266 stn	12,681 stn	83.2	74.5	-10.5	27.8
Capital Goods			5,938.6	6,727.5	13.3	6.8
Nonelectric Machinery			3,384.7	3,561.7	5.2	7.9
Data Processing Equipment			1,331.1	1,400.6	5.2	9.2
Computers			383.2	404.2	5.5	11.6
Peripheral Equipment and Parts			866.7	897.1	3.5	8.1
Disk and Tape Storage Units			74.4	104.1	39.9	8.3
Terminals			35.6	40.5	13.8	4.8
Printers			33.0	24.5	-25.8	5.7
Parts			585.3	592.7	1.3	8.3
Magnetic Computer Disks and Tapes			38.8	67.1	72.9	15.4
Semiconductor Production and Assembly Equipment and Parts			276.4	155.8	-43.6	19.0
Measuring, Testing and Controlling Instruments and Parts			533.2	581.1	5.0	11.9
Industrial Process-Type Instruments and Parts			45.9	40.4	-12.0	5.7
Chemical Analysis Equipment and Parts			59.7	56.3	-5.7	10.6
Physical Analysis Equipment and Parts			50.5	52.7	4.4	11.5
Equipment for Testing Electrical, Radio and Communications Circuits and Parts			216.5	258.0	19.2	19.0
Waveform Measuring and/or Analyzing Apparatus and Parts			39.7	42.3	6.5	16.0
Instruments for Measuring or Testing Combinations of Electrical Characteristics and Parts			95.9	132.4	38.1	26.2

Commodity	Quantity		Value		Percent Change 1985/86	Japan's Share of U.S. Exports 1986
	1985	1986	1985	1986		
Instruments for Measuring or Checking Electrical Quantities and Parts						
Scientific, Professional and Medical Equipment						
Electromedical and Electrotherapeutic Apparatus and Parts (excl. X-ray apparatus)			\$32.4	\$25.5	-21.3%	12.1%
Medical Equipment Based on X-Rays and Parts			265.5	337.0	26.9	13.5
Other Medical, Dental and Surgical Instruments and Parts			117.5	149.9	27.6	14.3
Bougies, Catheters, Drains and Sondes and Parts			35.0	43.8	25.1	18.1
Power Generating Equipment (excl. aircraft and automotive engines)			91.6	116.8	27.5	12.5
Nonfarm Tractors, Parts and Attachments			28.9	38.6	33.6	18.6
Parts of Tractor Tractors			77.1	73.3	5.2	4.2
Excavating and Paving Machinery and Parts			52.4	63.4	21.0	4.5
Drilling and Oilfield Equipment			29.8	39.3	31.9	4.5
Parts and Accessories for Oilfield and Gasfield Drilling Equipment			33.5	34.2	-2.0	2.4
Machinery and Parts for Making or Finishing Pulp, Paper and Paperboard			68.9	62.3	-9.6	2.5
Machine Tools and Parts			63.1	55.7	-11.7	2.7
Commercial and Industrial Heating and Cooling Equipment and Parts			27.8	28.9	4.0	11.0
Pumps and Compressors			59.8	83.3	39.3	9.4
Filtering and Purifying Machinery and Parts			25.2	31.5	25.0	9.9
Taps, Cocks, Valves and Similar Devices and Parts			42.0	42.9	2.1	6.6
Equipment for Service Industries			49.1	51.6	5.1	3.9
Electric Machinery			37.0	44.7	20.8	11.0
Semiconductors			35.5	37.1	4.5	6.1
Integrated Circuits			120.1	143.7	19.7	7.0
Linear Integrated Circuits			804.3	977.5	21.5	6.6
Chips, Dice and Wafers			235.1	294.3	25.2	6.0
Telephone Equipment and Parts			130.6	144.6	10.7	12.6
Radar Apparatus (excl. for planes and boats) and Parts			33.6	28.6	-14.9	13.5
Parts			75.7	107.0	41.3	4.0
Generators, Transformers and Accessories			38.9	72.3	85.9	10.1
Switches and Relays			70.8	92.2	30.2	16.4
Connectors			67.7	84.9	25.4	19.3
Transportation Equipment			75.9	73.7	-2.9	5.0
Civilian Aircraft			27.5	30.4	10.5	8.8
Passenger, Cargo and Combination Jet Transports			46.8	45.1	-3.6	11.4
Civilian Aircraft Engines, Parts and Accessories			1,749.6	2,188.3	25.1	5.7
Jet Turbines			905.9	1,161.3	28.2	15.8
Parts for Civilian Aircraft			886.4	1,130.3	27.5	18.0
Jet Engine Parts			552.1	659.6	19.5	8.8
Parts for Civilian Aircraft			50.3	37.9	-24.7	4.0
New Cars			185.0	230.3	24.5	12.2
Automotive Parts, Engines and Bodies			270.2	340.4	26.0	8.9
Engines and Parts			214.8	42.4	125.5	0.7
Transmissions			32.1	235.0	9.4	1.8
			25.6	19.1	-23.1	1.1
					-25.4	1.8
Food and Feed			5,000.7	5,042.8	0.8	22.7
Corn (excl. seed and popcorn)			1,292.6	866.0	-33.0	33.3
Sorghum (excl. seed)			240.9	177.3	-26.4	48.9
Soybeans (excl. seed)			937.0	837.2	-10.7	19.4
Animal Feeds			161.2	232.7	44.4	8.9
Dried Beet Pulp			43.9	55.1	25.5	74.3
Hay and Straw			175,374 stn	333,623 stn	93.1	90.8
Alfalfa Hay Cubes			441,397 stn	597,935 stn	36.4	93.2
Wheat			114,652,413 bu	118,472,413 bu	-9.5	14.4

Commodity	Quantity		Value		Percent Change 1985/86	Japan's Share of U.S. Exports 1986
	1985	1986	1985	1986		
Fruits and Vegetables						
Lemons	120,988 stn	135,352 stn	\$452.1	\$584.0	29.2%	22.0%
Grapefruit	118,701 stn	172,178 stn	77.2	83.0	7.5	87.9
Oranges and Tangerines	119,097 stn	123,622 stn	51.5	74.1	43.9	55.5
Fresh Non-Citrus Fruit			73.3	68.5	-6.5	29.4
Fruit and Vegetable Juices			33.7	50.1	48.7	13.1
Almonds			31.6	28.6	-9.5	18.6
Frozen Vegetables			45.3	89.7	98.0	21.3
Frozen French Fried Potatoes	52,859 stn	72,409 stn	61.0	84.2	38.0	68.0
Meat and Meat Products			33.8	45.0	33.1	82.9
Fresh and Frozen Beef			540.8	760.9	40.7	53.4
Fresh and Frozen Beef Offals	91,012 stn	122,334 stn	340.6	470.7	38.2	77.7
Fresh and Frozen Pork	40,133 stn	53,029 stn	76.1	119.4	56.9	41.6
Fresh and Frozen Poultry	10,118 stn	13,176 stn	32.7	52.3	59.9	74.0
Eggs (not in the shell)	51,158 stn	85,323 stn	57.3	91.2	59.2	31.2
Fish and Fish Products	11,999 stn	24,922 stn	17.3	34.6	100.0	83.5
Fresh and Frozen Whole Salmon	113,657 stn	108,482 stn	685.4	864.2	26.1	66.7
Fresh and Frozen Whole Herring	37,245 stn	31,907 stn	384.9	445.6	15.8	81.6
Fish Roe	14,042 stn	13,753 stn	54.7	46.8	-14.4	70.8
Frozen Snow Crab	9,691 stn	12,091 stn	99.5	87.6	-12.0	84.6
			33.1	62.3	88.2	84.7
Consumer Goods			1,415.5	1,689.9	19.4	12.0
Pharmaceuticals			590.5	647.4	9.6	19.9
Bulk Antibiotics			167.7	196.4	17.1	25.5
Bulk Cardiovascular Drugs			15.1	51.1	238.4	19.0
Packaged Vitamins			39.2	20.0	-49.0	24.3
Diagnostic Reagents			17.6	30.6	73.9	17.0
Blood and Blood Derivatives			161.5	170.2	5.4	37.0
Cigarettes	322,756,950 pk	481,915,900 pk	94.9	128.0	34.9	9.9
Electric Household Appliances (incl. air conditioners)			43.5	41.1	-5.5	4.1
Stainless Steel Cooking and Kitchenware			39.0	27.1	-30.5	66.8
Records and Consumer Electronics			34.0	31.3	-7.9	6.7
Toys and Sporting Goods			85.7	108.9	27.1	13.0
Golf Equipment			36.1	39.2	8.6	36.6
Still Film in Cartridges and Rolls	39,890,112 ut	28,535,398 ut	57.4	47.2	-17.8	31.5
Nonwoven Fabrics of Manmade Fibers			30.6	35.0	14.4	21.9
Clothing			33.7	45.8	35.9	5.1
Footwear			34.2	36.4	6.4	27.6
Gem Diamonds and Other Gem Stones			50.3	96.3	91.5	16.5
Jewelry			18.1	33.6	85.6	14.8
Works of Art			34.8	64.3	84.8	18.9
Printed Material			59.7	63.5	6.4	4.7
Miscellaneous			1,595.9	4,669.9	192.6	18.8
Military-Type Goods			439.0	261.8	-40.4	6.0
Other Domestic Exports			568.2	679.1	19.5	7.1
Military Aircraft Engine Parts			334.2	388.3	16.2	14.9
Re-exports			588.8	3,729.0	533.3	34.1
Bullion			0.0	3,095.5	--	84.2
	0 toz	6,755,228 toz				

Key to quantity abbreviations: bbl = barrels, stn = short tons
 bu = bushels, rba = running bales, toz = troy ounces
 gal = gallons, sft = square feet, ut = units
 mbf = thousand board feet, pk = packs
 mcf = thousand cubic feet, rha = running bales
 pc = pieces, sft = square feet

Source: U.S. Department of Commerce, U.S. Exports: Schedule E Commodity by Country (FT 410), December 1985 and December 1986.